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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LAROSE, COLIN M	

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/866,612	HUNG ET AL.	
	Examiner	Art Unit	
	Colin M. LaRose	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-12* is/are pending in the application.

4a) Of the above claim(s) *3-5* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 7-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Arguments and Amendments

1. Applicant's amendments and arguments filed 7 June 2005, have been entered and made of record.

Response to Amendments and Arguments

2. Applicant has amended claim 1 to denote that, "the transparent plate [is] disposed immediately adjacent the CIS module to maintain direct optical coupling therewith." Applicant asserts that Tuli does not disclose the CIS being "immediately adjacent" because Tuli's figures show a lens in between the image sensor and the transparent platen (see Remarks, pp. 6-7). However, Examiner points out that in the previous Office action, the claimed CIS was interpreted to correspond to the *combination* of the lens 6 and the solid state sensor 7. That is, the lens and the sensor collectively form a "contact image sensor module" that is operative to receive images of a finger that comes into contact with a transparent platen. Tuli's figures clearly show that such a module is immediately adjacent to the transparent platen so that images of a finger placed on the platen may be acquired.

U.S. Patent 6,178,255 by Scott has been relied upon herein for the rejection of claim 12. The above remarks also apply to the Scott reference. Scott teaches a contact image sensor module comprising an array of lenses coupled to an image sensor. Scott's sensor module is necessarily disposed immediately next to a transparent platen in order to capture image of a finger on the platen.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 8 and 9 are rejected under 35 U.S.C. § 102(b) as being anticipated by [Tuli99] (R. Tuli, *U.S. Patent 5,942,761: Enhancement Methods And Devices For Reading A Fingerprint Image*, Filing Date: June 1995).

The following is in regard to Claim 1. [Tuli99] discloses a fingerprint identification apparatus (i.e., a "fingerprint reading modular device capable of extracting and accurately reproducing and enhancing the ridge pattern on the skin of a fingertip is provided" – e.g., [Tuli99] Abstract, sentence 1 and Figs. 1-2 and 14). The apparatus comprises:

(1.a.) A contact image sensor (CIS) module (i.e. the Selfoc lens array **6** and solid state sensor **7** – cf. [Tuli99] Figs. 1-2).

(1.b.) A keyswitch (i.e. plate **5** - [Tuli99] Fig. 1) having:

1. Transparent plate for finger-tactility (cf. [Tuli99], *Detailed Description Of Preferred Embodiments*, sentence 2). Notice, in [Tuli99] Fig. 1, that the finger touches the transparent platen **5**. The plate, therefore, has "finger-tactility".
2. Relative movement with respect to the CIS module (cf. [Tuli99],

Background Of The Invention, ¶ 1, sentence 3; also note the operation of the device depicted in Figs. 1-2).

3. The transparent plate 5 being disposed immediately adjacent the CIS module to maintain direct optical coupling therewith (as shown in figures 1 and 2, Tuli's CIS module, composed of a lens 6 and a sensor 7, is disposed immediately next to the plate 5).

(1.c.) A restoring means (i.e. spring system **9** – cf. [Tuli99] Figs. 1-2) arranged on the keyswitch (i.e. fastened to the housing **1** and the glass or transparent platen **5** – cf. [Tuli99] column 5, lines 40-42 and Fig. 1) and to provide restoring force to the keyswitch (cf. [Tuli99] column 5, lines 40-45 and lines 56-60; the restoring force should also be apparent upon inspection of [Tuli99] Figs. 1-2).

The following is in regard to Claim 2. Notice, in [Tuli99] Figs. 1-2, that:

(2.a.) The CIS module (i.e. the Selfoc lens array **6** and solid state sensor **7**) is fixedly arranged (i.e. mounted to the internal housing (e.g. housing **1** in Figs. 1-2) – cf. [Tuli99], *Background Of The Invention*, ¶ 1, sentence 3).

(2.b.) The keyswitch is slidably fit on the base (cf. [Tuli99] column 5, lines 42-43; this arrangement is also apparent from Figs. 1-2).

The following is in regard to Claim 8. Clearly, the spring **9** (restoring means) of [Tuli99] is – as springs generally are – made of a resilient material.

Regarding claim 9, Tuli's keyswitch is integrally formed in include the transparent plate (i.e. keysitch includes the transparent plate 5, as explained above for claim 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over [Tuli99], in view of [Massimo01] (J. Massimo, *U.S. Patent 6,260,885: Latent Fingerprint Lifting And Recordation Device*, Filing Date: September 2000).

The following is in regard to Claim 7. The transparent platen **5** of [Tuli99] lacks:

(7.a.) A scale ruler to measure the fingerprint size.

[Massimo01] discloses a latent fingerprint recordation device ([Massimo01] Fig. 2) comprising:

(7.a.) Scale rulers (i.e. distance scales **26** and **28** – cf. [Massimo01] Fig. 2) to

measure the fingerprint size (cf. [Massimo01], *Detailed Description Of The Invention*, ¶ 3).

Generally speaking, [Massimo01] teaches that the overall size of a fingerprint is a property worthy of assessment, and, moreover, that such an assessment could be conveniently achieved through the use of rulers, such as distance scales **26** and **28**.

It would have been obvious to one of ordinary skill in the art, at the time of the Applicant's claimed invention, to modify the fingerprint identification apparatus of [Tuli99] to include rulers in order to measure the overall size of the fingerprint. As suggested in [Massimo01] (cf. [Massimo01], *Detailed Description Of The Invention*, ¶ 3), rulers would provide a convenient means for asessing the overall size of the fingerprint. Since the platen is the only surface on the apparatus with which the fingerprint makes contact, the only logical surface on the fingerprint apparatus, to incorporate the ruler into would, be that of the platen. Therefore, it would have been obvious to integrate such rulers on the platen of the apparatus.

[Massimo01] and [Tuli99] both disclose devices for recording fingerprints – albeit via divergent modes of capture. Though substantial structural differences exist between [Massimo01] and [Tuli99], they do not diminish the applicability of [Massimo01] to the device disclosed in [Tuli99]. [Massimo01] is not relied upon for the manner in which the fingerprint is captured, but rather for its suggestion that the overall size of a fingerprint commends measurement and, moreover, that such a measurement could be conveniently achieved using devices such as rulers.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. See, e.g., *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) and *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). Second, there must be a reasonable expectation of success. See, e.g., *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, e.g., *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

The teachings of [Massimo01] were shown above to provide adequate motivation for one of ordinary skill in the art to combine [Tuli99] and [Massimo01]. Again, [Massimo01] suggests that the overall size of a fingerprint is a property worthy of assessment, and, moreover, that such an assessment could be conveniently achieved through the use of rulers. In performing the modification proposed above, the specific placement of these rulers upon the platen would have been apparent to one of ordinary skill in the art, though no explicit teaching to do so is found in either of these reference. (cf. *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000): "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art").

As to the reasonable expectation of success, notice that a judicious placement of the ruler on the platen, as suggested above, would not, in any substantial way, perturb the function or innate structure of the fingerprint authentication device of [Tuli99]. Indeed, such modification

would be trivial to a skilled artisan, and could be successfully implemented with minimal experimentation. The resulting fingerprint apparatus would satisfy all limitations of Claim 7.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,178,255 by Scott et al. ("Scott") in view of U.S. Patent 5,942,761 by Tuli.

Regarding claim 12, Scott discloses a fingerprint identification apparatus (figures 3-8), comprising:

a base including at least one guiding shaft (scanner body 52 includes guide shafts 60 and 62);

a contact image sensor (CIS) module coupled to said base (a sensor module, comprising aspheric lenses 78, 80, and 84, mirror folding optics 82, prism 70, and camera 76, is coupled to the scanner body 52);

a keyswitch (moveable platen assembly 58) displaceably coupled to said base for tactile manipulation by a user's finger (i.e. a user tactilely manipulates the platen), said keyswitch including a transparent plate (optical platen 72) disposed immediately adjacent said CIS module (i.e. the sensor module is immediately adjacent the platen in order to capture images of a finger placed on the platen), said keyswitch including at least one sliding part (platen carriers 64 and 66) extending from said transparent plate to coaxially engage said guiding shaft in a slidable manner (i.e. the platen carriers 64 and 66 slide on the guide shafts 60 and 62); and

whereby relative movement between said transparent plate and CIS module is actuated responsive to the tactile manipulation (i.e. a user's finger controls the movement of the plate relative to the CIS module), said CIS module maintaining direct optical coupling with said

transparent plate during said relative movement (i.e. the CIS module is able to capture images of the finger while the plate is moving).

Scott does not appear to disclose at least one resilient member coupled to said keyswitch for restoratively biasing said keyswitch relative to said base.

Tuli discloses a fingerprint identification apparatus that includes the sliding of a transparent platen via tactile manipulation by a user. In particular, Tuli employs a spring mechanism 9 coupled to a keyswitch (i.e. the platen) in order to restoratively bias the keyswitch in the rest position relative to the base when the apparatus is not in use. When the platen is moved from the rest position, the reading of the fingerprint commences. See column 6, lines 6-11.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify scoot by Tuli to include a resilient member in the form of a spring mechanism, as claimed, since Tuli teaches that restoratively biasing a tactilely-manipulated transparent platen with a spring allows the platen to be easily and automatically returned to a resting position when the fingerprint apparatus is not in use (see column 6, lines 6-11).

8. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,942,761 by Tuli, as applied to claims 1 and 2 above, in view of U.S. Patent 6,178,255 by Scott et al. ("Scott").

Regarding claim 10, Tuli does not appear to disclose the base including at least one guiding shaft and the keyswitch including at least one sliding part coupled to the transparent plate, as claimed.

Scott discloses a fingerprint identification apparatus that includes the sliding of a transparent platen via tactile manipulation by a user. In particular, Scott discloses the inclusion of guiding shafts 60 and 62 attached to a base 52, and a keyswitch 58 including sliding parts 64 and 66 coupled to the transparent platen 72 to slidably engage the guiding shafts 60 and 62.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tuli by Scott to include the guiding shafts and the sliding parts, since both Tuli and Scott disclose fingerprint apparatuses that involve tactile manipulation of a sliding transparent platen, and Scott shows that it is conventional to include stabilizing rods engaged by sliding parts in order to facilitate movement of the keyswitch and produce a durable fingerprint apparatus.

Regarding claim 11, the combination of Tuli and Scott includes Tuli's restoring means (i.e. spring mechanism 9) disposed about the guiding shafts for resilient deflection responsive to slidable displacement of the plate (i.e. the spring 9 resists the movement of the plate by applying a spring force).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. **Please note that this application has been reassigned to Examiner Colin LaRose.** If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached on (571) 272-7414. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CML
Group Art Unit 2623
15 July 2005

VIKKRAM BALI
PRIMARY EXAMINER